CLAIMS

1. A filler sheet for a solar cell module, which is formed as a filler sheet laminated on front face and rear face sides of a solar cell element, and is made of a resin film produced by a resin composition comprising a copolymer of an α-olefin and an ethylenic unsaturated silane compound, or a modified or condensed body thereof, and one or more selected from a group consisting of a light resisting agent, an ultraviolet absorbent and a thermal stabilizer.

2. The filler sheet for a solar cell module according to claim 1, wherein the α-olefin is one or more selected from a group consisting of ethylene, propylene, 1-butene, isobutylene, 1-pentene, 2-methyl-1-butene, 3-methyl-1-butene, 1-hexene, 1-heptene, 1-octene, 1-nonene, and 1-decene.

3. The filler sheet for a solar cell module according to claim 1 or 2, wherein the ethylenic unsaturated silane compound is one or more selected from a group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, vinyltripropoxysilane, vinyltriisopropoxysilane, vinyltributoxysilane, vinyltripentyloxysilane, vinyltriphenoxysilane, vinyltribenzyloxysilane, vinyltrimethylenedioxysilane, vinyltriethylenedioxysilane, vinylpropionyloxysilane, vinyltriacetoxysilane, and vinyltricarboxysilane.

4. The filler sheet for a solar cell module according to any one of claims 1 to 3, wherein the copolymer of the α-olefin and the ethylenic unsaturated silane compound is a copolymer which further comprises one or more selected from a group consisting of vinyl acetate, acrylic acid, methacrylic acid, methyl acrylate, methyl methacrylate, ethyl acrylate, and vinyl alcohol.

5. A filler sheet for solar cell, which is formed as a filler sheet laminated on front face and rear face sides of a solar cell element, and is made of a resin film produced by a resin composition comprising a maleic anhydride modified polyolefin.

6. The filler sheet for solar cell according to claim 5, wherein the resin composition further comprises one or more selected from a group consisting of a light resisting agent, an ultraviolet absorbent and a thermal stabilizer.

7. The filler sheet for solar cell according to claim 5 or 6, wherein the maleic anhydride modified polyolefin is a substance modified by graft-copolymerizing a polyolefin with maleic anhydride, and a content ratio of maleic anhydride in the maleic anhydride modified polyolefin ranges from 0.001 to 30% by weight.

8. The filler sheet for solar cell according to any one of claims 5 to 7, wherein the maleic anhydride modified polyolefin has a weight-average molecular weight of 1,000 to 1300,000, the molecular weight being obtained by a gel permeation

chromatography, and a ratio of the weight-average molecular weight (Mw) to a number-average molecular weight (Mn), (Mw/Mn), is 6 or less.

9. The filler sheet for a solar cell module according to any one of claims 1 to 8, wherein the light resisting agent is made of a hindered amine type light stabilizer.

10. The filler sheet for a solar cell module according to any one of claims 1 to 9, wherein the ultraviolet absorber is made of a benzophenone type, triazole type, salicylic acid derivative type, or acrylonitrile derivative type ultraviolet absorbent.

11. The filler sheet for a solar cell module according to any one of claims 1 to 10, wherein the thermal stabilizer is made of a phosphorus type thermal stabilizer, a phenol type thermal stabilizer, or a lactone type thermal stabilizer.

12. The filler sheet for a solar cell module according to any one of claims 1 to 11, wherein the light resisting agent is contained at a content ratio of 0.01 to 5% by weight of the copolymer of the α-olefin and the ethylenic unsaturated silane compound, or the modified or condensed body thereof, or the maleic anhydride modified polyolefin.

13. The filler sheet for a solar cell module according to any one of claims 1 to 12, wherein the ultraviolet absorbent is

contained at the content ratio of 0.05 to 5% by weight of the copolymer of the α-olefin and the ethylenic unsaturated silane compound, or the modified or condensed body thereof, or the maleic anhydride modified polyolefin.

14. The filler sheet for a solar cell module according to any one of claims 1 to 13, wherein the thermal stabilizer is contained at the content ratio of 0.05 to 5% by weight of the copolymer of the α-olefin and the ethylenic unsaturated silane compound, or the modified or condensed body thereof, or the maleic anhydride modified polyolefin.

15. A solar cell module made by laminating a front face protecting sheet, a filler sheet, a solar cell element, a filler sheet and a rear face protecting sheet in sequence so as to be integrated, wherein the filler sheets are each the filler sheet for a solar cell module according to any one of claims 1 to 14.

16. The solar cell module according to claim 15, wherein the front face protecting sheet is made of a glass plate, a fluorine-contained resin sheet, a cyclic polyolefine resin sheet, a polycarbonate resin sheet, a poly(meth)acrylic resin sheet, a polyamide resin sheet, or a polyester resin sheet.

17. The solar cell module according to claim 15 or 16, wherein the solar cell element is made of a crystal silicon solar cell element or an amorphous silicon solar cell element.

18. The solar cell module according to any one of claims 15 to 17, wherein the rear face protecting sheet is made of a metal plate or metal foil, the fluorine-contained resin sheet, the cyclic polyolefine resin sheet, the polycarbonate resin sheet, the poly(meth)acrylic resin sheet, the polyamide resin sheet, or the polyester resin sheet.

19. The solar cell module according to any one of claims 15 to 18, wherein the front face protecting sheet and the filler sheet are beforehand laminated and integrated with each other.

20. The solar cell module according to any one of claims 15 to 19, wherein the rear face protecting sheet and the filler sheet are beforehand laminated and integrated with each other.

21. The solar cell module according to any one of claims 15 to 20, wherein a gel fraction in each of the filler sheets is 10% or less.